CONVERTING

THE COURTLAND 5th – 48.8 LATERAL

TO A BURIED PIPE SYSTEM

Funding Opportunity No. R24AS00059

WaterSMART Grants: Small-Scale Water Efficiency Projects for Fiscal Year 2024 and Fiscal Year 2025

APPLICANT:

KANSAS BOSTWICK IRRIGATION DISTRICT

528 MAIN STREET

COURTLAND, KS 66939

PROJECT MANAGER:

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Executive summary

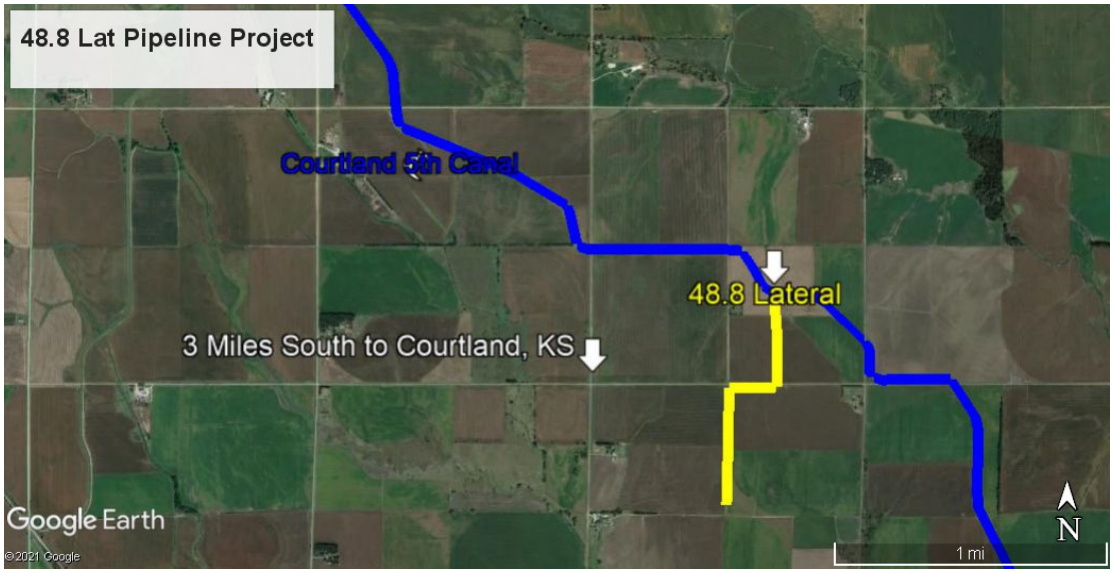
Date: January 9th, 2024 **Applicant Name**: Kansas Bostwick Irrigation District

City: Courtland **County:** Republic **State:** Kansas

Kansas Bostwick Irrigation District (KBID), a Category A applicant headquartered in North Central Kansas, plans to convert the Courtland 5th – 48.8 lateral canal into a buried pipe system to save an estimated 302.4 acre-feet of water annually as well as eliminate 1 mile of canal. The project will reduce seepage, evaporation and operational spills. The funding awarded will be used to aid in purchasing materials needed to complete this project. This project accomplishes one of the specific goals outlined in the FOA through the piping of canals to conserve water. If successful through this application, the project will begin as soon as possible following February 1st, 2025 and will be completed, at the very latest, by the end of October, 2026. The proposed project takes place within and as part of KBID which is a Bureau of Reclamation Irrigation District. Since inception, KBID has had perpetual easements and right-of-way for its canal system which passes through private landowner property. The project meets the goals of KBID's Water Conservation Plan.

Project Location

The 48.8 lateral is located in Republic County, Kansas and is approximately 3.3 miles north and 0.5 mile east of Courtland, KS. The project latitude is 39°82'N and longitude is 97°88'W.



Technical Project Description

This particular project will complete the piping of the upper end of the 48.8 lateral and connect it to the previously-piped lower end of the 48.8 lateral which occurred in 3 previous smaller pipeline projects in 1988, 1995 and 1999.

The pipeline initiation point will be at mile station 2618 + 50.0 on the Courtland 5th Canal at the headgate of the 48.8 lateral.

Project preparation will include bull dozer and patrol work to prepare the alignment of the proposed buried line and excavator work to remove existing structures. Removed structures will be broken with the KBID crane and wrecking ball if they are too large to load and haul. Structures will be loaded with the KBID loaders into dump trucks and taken to an established scrap yard. The stockpiling of materials and pipe needed for the project will also take place during these early stages of the project.

At the initiation point of the line, or present headgate area, three 24" x 20' perforated aeration screens will be installed and plumbed into the existing headgate C.H.O. box and connected to the initial piece of plastic pipe. Then the pipeline installation will begin. The KBID Hydromaxx 2700 trencher will be used to trench the line for the pipe installation and will utilize a laser transit to ensure proper grade control. An excavator with a sling is used to swing the pipe into the trench and align the pipe to be pushed together. A bull dozer or patrol will then used to backfill the trench-line after the pipe is installed.

All pipe used in this project will be rated for 80 PSI and installed to manufacturer criteria. This project will initiate with 24" PIP for the first 1770' of the line. At the 1770' mark, one turnout will be installed then reducing demand on the line to a level that 21" PIP can be installed. Over the next 2,530' of the project, seven field turnouts will be plumbed into the 21" line at various locations as needed. Finally, over the last 650' stretch of line, 18" PIP will be installed and connected to the previously buried portion of the lower end of the 48.8 lateral which consists of 15" PIP continuing south to the terminal end of the 48.8 lateral and existing waste-way. All angle fitting, Tee-fittings, and couplers used will consist of those with solvent welded design and rated at 100 PSI.

After all the pipe and turnout infrastructure needs are installed, the KBID crew will begin removing any and all scrap or excess material remaining at the site. Any remaining open lateral, which is not in the alignment of the pipeline, will also be destroyed at this time-frame of the project. KBID will leave the project area in a manner that the landowner can do further earthwork if so desired with their own farm equipment.

With the previous experience completing these types of projects and the skill of the KBID staff, along with owning the full line of equipment required, it's important to note that none of the project tasks will require any labor or machinery support outside of the district's own work force & equipment.

E.1.1. Evaluation Criterion A. Project Benefits (35 points)

- Will the project result in more efficient management of the water supply?

The most recognizable expected objective of this project will be **conserving an estimated 302.4 acre-feet annually** due to diminished seepage, mitigated operational spills, and evaporative losses.

- Where any conserved water as a result of the project will go and how it will be used?

The water conserved through the project will remain in Lovewell Reservoir allowing for that lake to remain at a higher volume longer into each irrigation season; a benefit to irrigators as well as recreationalists at Lovewell. This will in turn allow for less diversions from the Republican River as well as lower volume releases from KBID's upstream reservoir, Harlan County Lake.

- Are customers not currently getting their full water right at certain times of year?
- Does this project have the potential to prevent lawsuits or water calls?
- What are the consequences of not making the improvement?
- Are customer water restrictions currently required?
- Other significant concerns that support the need for the project.

Declining water supply in the Republican River Basin has been an issue for decades. Due to declining water supplies, KBID made policy over 20 years ago that 15" per acre would be considered a full allocation going forward. However, in fourteen of the last 20 years, the irrigation district was forced to restrict their irrigators due to insufficient water supply. In 2023, irrigators within the district were restricted to 13" per acre and it appears that in 2024 irrigators will also find themselves starting the irrigation season with restrictions in place. The Republican River Basin remained embroiled in controversy over groundwater depletion of river flows from the late 1990s until the latest Supreme Court Settlement on the issue that was delivered in 2015. That particular ruling stated that Nebraska had not delivered the prescribed amount of water to Kansas. While the ruling went in favor of Kansas, it didn't not bring back the water that Nebraska overused in the past. The only tool KBID has to answer the problems created by this controversy, aid in preventing future lawsuits and to protect what supply is available annually, is to continue improving the district's efficiency and conserving water, primarily through projects like the one outlined in this application.

- Will the project improve broader water supply reliability at sub-basin or basin scale?

- Will the proposed project increase collaboration and information sharing among water managers in the region? Please explain.
- Is the project in an area that is experiencing, or recently experienced, drought or water scarcity? Will the project help address drought conditions at the sub-basin or basin scale? Please explain.
- Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species of particular recreational, or economic importance)? Please explain.
- Will the proposed project positively impacts/benefit various sectors and economies within the applicable geographic area (e.g., impacts to agriculture, environment, recreation, and tourism)? Please explain.
- Will the project complement work being done in coordination with NRCS in the area (e.g., the area with a direct connection to the districts water supply)? Please explain.

As projects like this conserve water within the entire Republican River Basin many entities benefit including recreational users at both Harlan County Lake and Lovewell Reservoir and both bodies of water experience more tourism as lake levels remain higher, longer into each summer. KBID has collaborated with many other water users within the basin, chiefly its upstream sister Reclamation district, Bostwick Irrigation District in Nebraska (NBID). Since both districts rely on the same source of water, namely the Republican River, NBID also benefits whenever KBID makes water saving improvements. KBID also cooperates and shares information regarding water conservation projects like this one with the Kansas Water Office (KWO). The KWO has coordinated with other agricultural users downstream of KBID to form the Lower Republican Access District (LRAD). As projects like this one create the potential for more water to remain in the stream and held in upstream reservoirs, it increases the chances of viability for further beneficial uses of water like that of the LRAD. So, not only will this project benefit recreationalists and tourism within the area, it will also help keep the economy in this area, so reliant on irrigated agriculture. With less diversion volumes from the Republican River by KBID, increased flows will be available to downstream tributaries on the Republican River including areas along the Kaw River where certain State Threatened and Federally Endangered species such as the Topeka Shiner minnow exists. Through projects like this one many irrigators within KBID have subsequently installed center pivots utilizing EQIP funding through NRCS. In those instances, KBID works with both NRCS and the producer as needed to supply historical irrigation data and other needed information.

E.1.2. Evaluation Criterion B. Planning Efforts Supporting the Project (25 points)

Plan Description and Objectives: Is your project supported by a specific planning document or effort? If so, describe the existing plan. When was the plan developed? What is the purpose and objective of the plan?

Yes. Contract No. 009D6B0120, between the United States Department of the Interior Bureau of Reclamation and Kansas Bostwick Irrigation District, was signed and implemented on January 1st, 2001. Within that contract

and as a part of District Operating Plan under Water Conservation Measures within Attachment B, KBID agreed to many items concerning water conservation. Those items include establishing a revolving water conservation fund to be utilized for annual costs associated with water conservation activities such as the project outline in this application. The purpose of the plan is for KBID to continue and improve its existing policies and practices to further the goals of water conservation. This project also will benefit a larger initiative to address water reliability. In October of 2013, then Kansas Governor, Sam Brownback, issued a call to action for his Administration to develop a 50-year Vision for the Future of Water in Kansas. The Mission Statement of the Vision is to "*Provide Kansans with the framework, policy and tools, developed in concert with stakeholders, to manage, secure and protect a reliable, long term statewide water supply while balancing conservation with economic growth.*" A project like the one outlined in this application falls directly in line with the 50-year Vision.

Plan Development: Who developed the planning effort? What is the geographic scope of the plan? If the planning effort was not developed by the Category A applicant, describe the Category A applicant's involvement in developing the planning effort.

The District Operating Plan and Water Conservation Measures portion were specifically developed in coordination by officials from KBID, NBID and the Bureau of Reclamation prior to the 2001 contract mentioned above being implemented.

Support for the Project: Describe to what extend the proposed project is supported by the identified plan. Consider:

- Is the project identified specifically by name and location in the planning effort?
- Is this type of project identified in the planning effort?
- Explain whether the proposed project implement a goal, objective, or address a need or problem identified in the existing planning effort?
- Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.

Under item 3, outlined in the District Operating Plan – Water Conservation Measures portion, it specifically highlights buried pipe projects such as the one outlined in this application as an objective. The 48.8 lateral has been determined as a priority chiefly due to the fact that it is one of the few remaining laterals that KBID can feasibly bury with it's own crew and equipment.

E.1.3. Evaluation Criterion C. Implementation and Results (20 points)

- Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.

Milestone / Task / Activity	Planned Start Date	Planned Completion Date
Site Preperation	2/1/2025	2/28/2025
Installing Pipeline & Turnouts	3/1/2025	4/30/2025
Final Dirtwork & Site Cleanup	5/1/2025	5/31/2025

Task 1 - Site Preparation - will begin whenever able on or after February 1st, 2025

Task 2 - Laying pipeline and installing turnouts - when able following Task 1

Task 3 - Concluding tasks of the project after the pipe is laid - site cleanup and final dirt work - will conclude by the end of May of 2025

As a general rule, the duration of each portion of the project is estimated in the following manner: Task 1 represents 30% of the project, Task 2 represents 60% of the project, and Task 3 representing 10% of the project.

The CW 48.8 lateral project will begin whenever possible on or after February 1st, 2025 and end in May 2025 prior to the 2025 irrigation season beginning. If unforeseen circumstance occurs and a delay was encountered, the project would commence following the 2025 irrigation season and be completed prior to the 2026 irrigation season.

Task 1 will be considered the project preparation phase and will include bull dozer and patrol work to prepare the alignment of the proposed buried line and excavator work to remove existing structures. Removed structures will be broken with the KBID crane and wrecking ball if they are too large to load and haul. Structures will be loaded with the KBID loaders into dump trucks and taken to an established scrap yard. The stockpiling of materials and pipe needed for the project will also take place during these early stages of the project.

Task 2 will begin the plumbing in of the three 24" x 20' perforated aeration screens at the current 48.8 headgate location. Then, the pipeline installation will begin. KBID's Hydromaxx 2700 trencher will be used to trench the line for the pipe installation. A bull dozer or patrol will then be used to backfill the trench-line after the pipe is installed. During this portion of the project all angle fittings, Tee-fittings, couplers, valves and flowmeters will be installed at each turnout location.

Task 3 will commence after all the pipe and turnout infrastructure needs are installed. The KBID crew will begin removing any and all scrap or excess material remaining at the site. Any remaining open lateral, which is not in the alignment of the pipeline, will also be destroyed at this time-frame of the project.

- Proposals with a budget and budget narrative that provide a reasonable explanation of project costs will be prioritized under this criterion.

An extensive explanation of all budget costs and a detailed budget narrative is found within this application under the section titled "Budget Narrative" as requested within the funding announcement packet and following this section containing Evaluation Criteria.

- Describe any permits and agency approvals that will be required along with the process and timeframe for obtaining such permits or approvals.

This project will require no special permits or approvals.

- Identify and describe any engineering or design work performed specifically in support of the proposed project. What level of engineering design is the project currently? If additional design is required, describe the planned process and timeline for completing the design.

As with all pipelines KBID has installed in the past, this one shall be installed following the manufacturer's design criteria. KBID has consulted Reclamation engineers in the design of similar projects and will do so for this one. All meter installations shall meet State of Kansas specifications.

- Does the applicant have access to the land or water source where the project is located? Has the applicant obtained any easements that are required for the project? If the applicant does not yet have permission to access the project location, describe the process and timeframe for obtaining such permission.

The proposed project takes place within and as part of KBID which is a Bureau of Reclamation Irrigation District. Since inception, KBID has had perpetual easements and right-of-way for its canal system which passes through private landowner property. As this project will not leave any pre-existing right-of-way, no new easements will be needed.

- Identify whether the applicant has contacted the local Reclamation office to discuss the potential environmental and cultural resource compliance requirements for the project and the associated costs. Has a line item been included in the budget for costs associated with compliance? If a contractor will need to complete some of the compliance activities, separate line items should be included in the budget for Reclamation's costs and the contractor's costs.

After consulting with staff at the Bureau of Reclamation's Nebraska-Kansas Area Office in regards to activities undertaken by Reclamation for environmental and regulatory compliance, KBID is expecting no extra cost to be incurred for these measures.

E.1.4. Evaluation Criterion D. Nexus to Reclamation (5 Points)

Up to **5 points** may be awarded based on the extent that the proposal demonstrates a nexus between the proposed project and a Reclamation project or activity. Describe the nexus between the proposed project and a Reclamation project or activity, including:

Is the proposed project connected to a Reclamation project or activity?

If so, how? Please consider the following:

- Does the applicant have a water service, repayment, or operations and maintenance(O&M) contract with Reclamation?

Yes. Contract No. 009D6B0120.

- If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?
- Will the proposed work benefit a Reclamation Project area or activity?

Kansas Bostwick Irrigation District (KBID) is a Pick-Sloan Project headquartered in Courtland, Kansas. KBID is a Bureau of Reclamation irrigation district served by and lying within the Bureau of Reclamation's Nebraska–Kansas Project Area headquartered in McCook, Nebraska. Water storage for the district is within the Corps of Engineers Harlan County Reservoir in Nebraska and in the Bureau of Reclamation's Lovewell Reservoir in Kansas, both of which are in the same basin of the Republican River.

E.1.5. Evaluation Criteria E. Presidential and Department of the Interior Priorities (15 points)

E.1.5.1. Sub-criterion No. E1. Climate Change

- Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.
- Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?

Pipelines like the one proposed in this application are a much more efficient way to deliver irrigation water, as well as being more reliable than canals. The water saved through projects like this one will certainly strengthen KBID's water supply sustainability and therefore have a positive impact on all users within the Republican River Basin.

The district will also benefit by no longer having to buy the chemicals needed to control vegetative species in the open canal. Likewise, following project completion, the district will spend less on fuel for pickups and other equipment used for standard operation and maintenance. Both of these points have obvious benefits to the environment with the mitigation of chemical injection into the environment and less carbon emission by internal combustion engines which will make a positive impact to help combat the climate crises.

E.1.5.2. Sub-criterion No. E2. Disadvantaged or Underserved Communities

- Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool, available online at Explore the map – Climate &

Economic Justice Screening Tool (https://screeningtool.geoplatform.gov) to identify any disadvantaged communities that will benefit from your project.

Using the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening tool, it exhibits that northern Jewell County KS, where KBID has canals, pipeline and one of its two holding reservoirs, is identified as a Disadvantaged area due to this area meeting more than 1 burden threshold and the associate socioeconomic threshold.

- If applicable, describe how the project benefits those disadvantaged or underserved communities identified using the tool. For example, does the project increase reliability of water supplies, improve water quality, provide economic growth opportunities, improve or expand public access to natural areas or recreation, or provide other benefits in a disadvantaged or underserved community?

As irrigated agriculture is the primary driver of the local economy in this area, it's vital to implement water saving projects like this one to increase the area's overall reliability of water supply, and provide economic growth opportunities. Any water saved through projects like this one will leave more water in KBID's water supply reservoirs later into each summer which will improve and expand the public's access to recreation at this bodies of water.

E.1.5.3. Sub-criterion No. E3. Tribal Benefits

- Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for a Tribe?
- Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?
- Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?

The answer to each of these items is no. However, the proposed project will not limit access to any ceremonial use of Indian sacred sites or result in other impacts on tribal lands.

Budget Narrative

Jared "Pete" Gile is the Superintendent of KBID and will be the Project Manager. He will be in charge of the day-to-day operations of the project and will be assisted by an on-site foreman. Office Manager, Ashliegh Brandenbergh will be in charge of tracking specific figures and costs as the project unfolds. Both individual's roles are considered normal day to day costs for KBID and within their regular daily scope of duties as employees of the district, so their salaries, specifically applicable to this project will not be included as a project cost and the same goes for executing compliance and reporting requirements.

Field crew hours and the subsequent associated salary and fringe benefit figures were calculated using actual project numbers from previous projects of similar size and scope completed by KBID. KBID has buried laterals with its equipment and crew for years and has many years of data to aid in extrapolating these calculated figures for estimating costs relating to hours work be each employee.

The labor rates included for all personnel is certified to be the actual labor rates of each individual identified in this application. Also included in the tables below are the actual fringe benefit rates for each individual which includes Health coverage, FICA, and KPERs retirement.

2023 KBID PERSONNEL WAGES & BENEFITS PAID BY EMPLOYER							
EMPLOYEE	HOURLY WAGE	MEDICARE	FICA	KPERS	HEALTH INSURANCE	HOURLY FRINGE TOTAL	TOTAL HOURLY RATE
		Hourly	Hourly	Hourly	Hourly		
Excav. Optr (TA)	**$20.70**	$0.26	$1.10	$1.88	$9.73	**$12.97**	**$33.67**
Trencher Optr. (DD)	**$23.34**	$0.31	$1.34	$2.10	$6.19	**$9.95**	**$33.29**
Loader Optr (BR)	**$17.98**	$0.23	$0.99	$1.62	$3.08	**$5.92**	**$27.27**
Excav Optr. (WF)	**$20.84**	$0.28	$1.19	$1.88	$3.08	**$6.43**	**$29.49**
Laborer (FH)	**$19.68**	$0.27	$1.14	$1.78	$6.62	**$9.81**	**$36.98**
Laborer (TJ)	**$23.50**	$0.31	$1.32	$2.12	$9.73	**$13.48**	**$23.93**
Dozer Optr. (RS)	**$17.98**	$0.24	$1.01	$1.62	$3.08	**$5.95**	**$23.90**
Foreman (AS)	**$23.50**	$0.32	$1.35	$2.12	$9.73	**$13.52**	**$37.02**
Laborer (MR)	**$17.98**	$0.24	$1.05	$1.62	$0.00	**$2.91**	**$20.89**
Laborer (RW)	**$19.95**	$0.27	$1.15	$1.78	$9.73	**$12.93**	**$32.88**

As KBID owns all the necessary equipment and machinery that will be required for this project, none will have to be rented. KBID established hourly rates for this application by using rates established by the United States Army Corps of Engineers within their Construction Equipment Ownership and Operating Expense Schedule. Estimates on the number of hours required for each machine were extrapolated from using actual numbers and data from similar sized projects KBID has completed in the past.

All of the materials and supplies needed for the project are listed below in the Budget Proposal Table. The supplies are itemized by major category, unit price, quantity and purpose. All items are those that will be used in the field for accomplishing the goals of this project.

No work will be done on this project by sub recipients, consultants, or contractors.

After consulting with staff at the Bureau of Reclamation's Nebraska-Kansas Area Office in regards to activities undertaken by Reclamation for environmental and regulatory compliance, KBID is expecting no extra cost to be incurred for these measures.

No other expenses or indirect costs have been identified.

If successful, KBID will contribute $52,163.19 to the project by way of providing the equipment and labor. The material needs for the project total $210,544.16. To cover the materials costs, KBID will utilize award funding in the amount of $100,000 as well as an additional $110,544.16 from the U.S. Supreme Court Settlement funds earmarked for water conservation projects within the district and held by the Kansas Water Office (KWO) for disbursement. Therefore, total project costs would come to $262,707.35. Therefore, the non-federal funding provided by KBID and the KWO would equal 61.94% of the total, and award funding comprising the remaining 38.06%.

Project Budget

PROJECT NAME:	***CONVERTING THE COURTLAND 5th - 48.8 LATERAL TO A BURIED PIPE SYSTEM***
FUNDING OP NO.	***R24AS00059***
	ESTIMATE
TOTAL LABOR COST:	*$26,702.34*
TOTAL EQUIP COST:	*$25,460.85*
TOTAL MATERIALS COST:	*$210,544.16*
TOTAL PROJECT COST:	**$262,707.35**

Funding Plan and Letters of Commitment

Kansas Bostwick's contribution to the project funding will come partially from the irrigation district's conservation reserve funds as well as O&M funds raised on annual basis through assessments. The Board of Directors also charges each irrigator receiving a benefit from every project a fee for that benefit. It is Board Policy that anyone receiving a benefit should in some way participate in the cost of the improvement to the system. This will not be considered in the application and will be a portion of the districts share.

As a result of the 2015 United States Supreme Court Settlement concerning the Republican River, in the case of The State of Kansas, Plaintiff v. The State of Nebraska and The State of Colorado, the Court ordered that the State of Kansas be awarded a settlement amount of $5.5 million from the State of Nebraska.

This led to significant collaboration between many users on the Republican River. Through the action of several individuals representing multiple agencies within the State of Kansas and key state legislators, $3.5 million of the award was secured to be used for water conservation projects in the Republican River Basin in Kansas.

Of the $3.5 million, KBID subsequently signed a contract with the Kansas Water Office (KWO) for $2.5 million of these non-Federal funds (see KWO Contract No. 16-115 and letter of commitment attached). The KWO is the agency who is charged with holding these funds for dispersal to the District. Therefore, the KWO will be an integral partner with KBID on projects like the one described within this application. This contract outlines that the $2.5 million earmarked for KBID be used to fund materials purchases for various projects outlined within the contract.

In the past KBID has received multiple WaterSMART and Field-Service grant awards. With the approval of this application KBID will be able to maintain continuity with its goals and continued plans of water conservation projects.

If successful, KBID will contribute $52,163.19 to the project by way of providing the equipment and labor. The material needs for the project total $210,544.16. To cover the materials costs, KBID will utilize award funding in the amount of $100,000 as well as an additional $110,544.16 from the U.S. Supreme Court Settlement funds earmarked for water conservation projects within the district and held by the Kansas Water Office (KWO) for disbursement. Therefore, total project costs would come to $262,707.35. Therefore, the non-federal funding provided by KBID and the KWO would equal 61.94% of the total, and award funding comprising the remaining 38.06%.

This project to pipe the upper end of the 48.8 lateral will convert the entire lateral into a fully-piped project which will have multiple benefits to the sytem. Three smaller portions of the lower end of the 48.8 lateral were piped in 1988, 1995 and 1999. The total investments in these earlier projects totaled $2,494.89, $4604.00 and $15,514.86 respectively.

Budget Proposal

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	$100,000.00
Costs to be paid by the applicant	$52,163.19
Value of third-party contributions	$110,544.16
TOTAL PROJECT COST	**$262,707.35**

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/UNIT	QUANTITY		
Salaries and Wages				
Excav. Optr (TA)	$20.70	89.21	HOURS	$1,846.65
Trencher Optr. (DD)	$23.34	89.21	HOURS	$2,082.16
Loader Optr (BR)	$17.98	89.21	HOURS	$1,604.00
Excav Optr. (WF)	$20.84	89.21	HOURS	$1,859.14
Laborer (FH)	$19.68	89.21	HOURS	$1,755.65
Laborer (TJ)	$23.50	89.21	HOURS	$2,096.44
Dozer Optr. (RS)	$17.98	89.21	HOURS	$1,604.00
Foreman (AS)	$23.50	89.21	HOURS	$2,096.44
Laborer (MR)	$17.98	89.21	HOURS	$1,604.00
Laborer (RW)	$19.95	89.21	HOURS	$1,779.74
Fringe Benefits				
Excav. Optr (TA)	$12.97	89.21	HOURS	$1,157.05
Trencher Optr. (DD)	$9.95	89.21	HOURS	$887.64
Loader Optr (BR)	$5.92	89.21	HOURS	$528.12
Excav Optr. (WF)	$6.43	89.21	HOURS	$573.62
Laborer (FH)	$9.81	89.21	HOURS	$875.15
Laborer (TJ)	$13.48	89.21	HOURS	$1,202.55
Dozer Optr. (RS)	$5.95	89.21	HOURS	$530.80
Foreman (AS)	$13.52	89.21	HOURS	$1,206.12
Laborer (MR)	$2.91	89.21	HOURS	$259.60
Laborer (RW)	$12.93	89.21	HOURS	$1,153.49

Equipment				
JCB Excavator (Equivalent- 47,400#, 153 HP)	$47.36	36.43	EQUIP HRS	$1,725.39
CAT 320C Excavator (Equivalent - 47,400#, 153 HP)	$47.36	29.93	EQUIP HRS	$1,417.37
CAT 323FL Excavator	$47.36	29.93	EQUIP HRS	$1,417.37
CAT 314 Long-Reach Excavator	$53.84	20.32	EQUIP HRS	$1,094.26
CAT D7 Dozer (Equivalent CAT D7)	$143.65	25.91	EQUIP HRS	$3,722.48
IHC TD-15 Dozer (Equivalent - 145 HP)	$85.77	2.54	EQUIP HRS	$217.90
Fiat-Allis 14C Dozer (Equivalent 155 HP)	$85.77	60.97	EQUIP HRS	$5,229.65
Linkbelt Is-78 Crane (Equivalent 30 ton 80' boom)	$80.46	0.51	EQUIP HRS	$40.88
Skid Steer (Equivalent 60" bucket, 67 HP)	$19.98	1.52	EQUIP HRS	$30.46
Galion Motorgrader (Equivalent - 179 HP)	$65.52	14.74	EQUIP HRS	$965.45
CAT 130 Motorgradern (Equivalent - 179 HP)	$65.52	14.74	EQUIP HRS	$965.45
Hough International 540 Loader #1 (Equivalent - 208 HP)	$93.02	0.76	EQUIP HRS	$70.90
Komatsu 540 Loader #2 (Equivalent - 208 HP)	$93.02	0.76	EQUIP HRS	$70.90
2700 Hydramaxx Port Industries Trencher	$163.96	41.16	EQUIP HRS	$6,748.06
JLG 1255 Telehandler	$51.90	32.21	EQUIP HRS	$1,671.91
New Holland E35B Mini-Excavator	$12.96	5.59	EQUIP HRS	$72.44

Supplies and Materials				
24" PIP PIPE	$43.99	1,832	MATERIALS	$80,589.68
21" PIP PIPE	$34.59	2,606	MATERIALS	$90,141.54
18" PIP PIPE	$24.85	670	MATERIALS	$16,649.50
24" X 20' AERATION SCREENS	$1,080.00	3	MATERIALS	$3,240.00
24" COUPLERS FOR SCREENS	$68.00	3	MATERIALS	$204.00
AERATION END CAP	$54.30	1	MATERIALS	$54.30
24" CMP 90° ELBOW - SW	$391.00	1	MATERIALS	$391.00
H-STANDS FOR SCREENS	$90.00	4	MATERIALS	$360.00
24" 45° ELBOW - SW	$680.07	2	MATERIALS	$1,360.14
24" x 12" TEE FITTING - SW	$476.06	1	MATERIALS	$476.06
24" 90° ELBOW - SW	$1,054.32	1	MATERIALS	$1,054.32
24" X 21" REDUCER - SW	$214.35	1	MATERIALS	$214.35
21" 90° ELBOW - SW	$479.61	1	MATERIALS	$479.61
21" X 12" TEE FITTING - SW	$337.54	7	MATERIALS	$2,362.78
21" X 18" REDUCER - SW	$145.62	1	MATERIALS	$145.62
18" 45° ELBOW - SW	$154.88	2	MATERIALS	$309.76
18" X 15" REDUCER	$108.74	1	MATERIALS	$108.74
12" X 10" REDUCER - SW	$35.96	9	MATERIALS	$323.64
10" COUPLER - SW	$21.01	9	MATERIALS	$189.09
15" END CAP - SW	$52.66	1	MATERIALS	$52.66
12" END CAP - SW	$36.80	1	MATERIALS	$36.80
10" END CAP - SW	$30.93	1	MATERIALS	$30.93
10" 90° ELBOW - SW	$83.35	12	MATERIALS	$1,000.20
10" BOLTED REPAIR COUPLERS	$116.63	4	MATERIALS	$466.52
10" UNDERGROUND GEAR VALVES	$231.00	6	MATERIALS	$1,386.00
10" VAN STONE FLANGES	$80.22	12	MATERIALS	$962.64
10" VALVE EXTENSION STEMS - 48"	$147.00	6	MATERIALS	$882.00
2" ALUM. VENT-VAC RELIEF VALVES	$12.48	6	MATERIALS	$74.88
2" AIRVENT PIPE (FEET)	$1.98	90	MATERIALS	$178.20
FLOWMETER	$1,472.00	4	MATERIALS	$5,888.00
10" METER TUBE	$232.80	4	MATERIALS	$931.20
TOTAL DIRECT COSTS				**$262,707.35**
Indirect Costs				
Type of rate	percentage	$ base		N/A
TOTAL ESTIMATED PROJECT COSTS				**$262,707.35**

Environmental and Cultural Resources Compliance

Construction of Kansas Bostwick Irrigation District was done in several phases. The first phase of the project, or Block I, was completed in 1957. The final phase of the project, or Block IV, was completed in 1969. As one can imagine, the construction of approximately 250 miles of canals and water delivery structures through previously unirrigated land caused a significant impact to the local environments where the construction originally took place.

At KBID, we like to think that through the conversion of open canals to buried pipe systems, we are returning the local environment surrounding these projects to the way they existed prior to canal construction, but still with the benefit of irrigation for increased crop production.

The proposed project should have minimal impact on the surrounding environment. The earth-disturbing work that will occur through the project will be to excavate a trench to lower the pipe into. After the pipe is placed in the trench, it will be back-filled by a bull-dozer or patrol. The remaining profile of the open canal will be eliminated by a bull-dozer and along with a patrol, will be used to smooth and feather out the soil that previously made up the canal channel and profile. The only way in which air quality should be affected during the project is through any dust that may be kicked up by tires or tracks of the machines while they are in operation.

There aren't any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places.

The Summary of the Final Environmental Impact Statement for the Republican River Basin in conjunction with the Repayment and Long-Term Water Service Contract Renewals that was published in June of 2000 didn't identify any Threatened or Endangered Species in our area of the basin and to this day there are none known to exist.

There are no wetlands or surface waters inside the project boundaries that fall under the Clean Water Act jurisdiction as "Waters of the United States" that would potentially be impacted by this project.

There are no known archaeological sites in the proposed project area.

The proposed project will have no adverse effect on low income or minority populations.

The proposed project will not limit access to any ceremonial use of Indian sacred sites or result in other impacts on tribal lands.

The proposed project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area.

This project will require no special permits or approvals.

KANASAS BOSTWICK IRRIGATION DISTRICT NO. 2

RESOLUTION NO. 2023-02

Whereas the Republican River Basin is frequented by drought,

Whereas water is the lifeblood of the agricultural community,

Whereas WaterSMART grants provide a source of funding for capital improvements of the District,

Whereas the installation of buried pipelines, canal automation products and technology to increase efficiencies within the District are necessary for the District's future viability,

Whereas funding is needed to maintain continuity in the District's efforts to improve efficiency,

Now therefore be it resolved that the Kansas Bostwick Irrigation District No. 2 Board of Directors agrees and authorizes that this application be submitted to the Bureau of Reclamation for the consideration under the **WaterSMART Grants: WaterSMART Small-Scale Water Efficiency Products for Fiscal Year 2024 and Fiscal Year 2025, Funding Opportunity Number R24AS00059** grant program for the installation of buried pipe to replace the open 48.8 lateral. Superintendent, Jared "Pete" Gile is granted the legal authority to enter into an agreement. If selected, the Board of Directors agree to provide in-kind funding to the project and will work closely with Reclamation to meet all established deadlines.

The foregoing Resolution was considered by the Board of Directors of the Kansas Bostwick Irrigation District No. 2 at a meeting held on 7 December 2023, and unanimously adopted.

BOARD OF DIRECTORS

Gary L. Housholder – President

Brad D. Peterson - Secretary

Monty D. Dahl - Treasurer

To whom it may concern:

My name is Ryan Carlgren and I'm an irrigator with farm ground north of Courtland, KS. Pete has informed me he's submitting a grant application to install a buried pipeline to replace the open canal that currently feeds my pivot and some gravity fed irrigation pipe. Being the furthest downstream irrigator on this canal my turnouts are always the first one to suffer whenever we have upstream issues or a lack of water. If this canal was done away with and it was all made into a solid pipeline Pete explains that my troubles on the bottom end will be over. Therefore, I'm in full support of this project.

Thanks for your consideration.

Sincerely,

Ryan Carlgren

900 SW Jackson Street, Suite 404
Topeka, KS 66612

Kansas Water Office

Phone: (785)-296-3185
Fax: (785)-296-0878
www.kwo.ks.gov

Connie Owen, Director

Laura Kelly, Governor

January 8, 2024

Dear WaterSMART Grants Selection Committee,

The Kansas Water Office (KWO) is pleased to support the WaterSMART grant application by the Kansas Bostwick Irrigation District (KBID). The KBID intends to use the grant to convert the open irrigation canal Courtland 5th – 48.4 Lateral to a buried pipe system.

The proposed project will contain a 0.93 mile stretch of canal, and will cost an estimated total of $262,707.35. The KWO offers to pay a portion of the total project cost to cover the materials of the project in the amount of $110,544.16.

The date the funds from KWO will be made available to the KBID would be 7 calendar days after the KBID provides to the KWO a listing of all expected materials to be purchased. There would be no other time constraints on the availability of funds.

Contingencies associated with the funds from KWO would include: KBID will provide to the KWO verification of the purchase of equipment and supplies with Financial Estimate and Invoice Receipt. Also, the KBID will provide to the KWO a report of the preceding 12-month period, which would include:

a) the open irrigation canal section or sections converted to buried pipe systems,
b) the amount of in-kind contribution provided by KBID,
c) other sources and amounts of funding obtained and used (if applicable),
d) the estimated amount of water loss saved as a result of the conversion,
e) significant issues encountered during implementation,
f) any significant changes to plans for canal conversion previously submitted, and
g) general plans of work for conversion of open irrigation canal to buried pipe systems to be accomplished in the subsequent July to June, 12-month period.

Again, we are pleased to support the WaterSMART grant application by the Kansas Bostwick Irrigation District. Please let me know if you need further information or clarification in order for funding of this grant to move forward.

Sincerely,

Connie Owen

Connie Owen
Director
Kansas Water Office